

(1) Meet *ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings*, January 2004 (incorporated by reference, see 433.3); and

(2) If life-cycle cost-effective, achieve energy consumption levels, calculated consistent with paragraph (b) of this section, that are at least 30 percent below the levels of the baseline building.

(b) Energy consumption for the purposes of calculating the 30 percent savings shall include space heating, space cooling, ventilation, service water heating, lighting and all other energy consuming systems normally specified as part of the building design except for receptacle and process loads.

(c) If a 30 percent reduction is not life-cycle cost-effective, the design of the proposed building shall be modified so as to achieve an energy consumption level at the maximum level of energy efficiency that is life-cycle cost-effective, but at a minimum complies with paragraph (a) of this section.

§ 433.5 Performance level determination.

(a) Each Federal agency shall determine energy consumption levels for both the baseline building and proposed building by using the Performance Rating Method found in Appendix G of *ANSI/ASHRAE/IESNA Standard 90.1-2004, Energy Standard for Buildings Except Low-Rise Residential Buildings*, January 2004 (incorporated by reference, see (433.3), except the formula for calculating the Performance Rating in paragraph G1.2 shall read as follows:

Percentage improvement = $100 \times (\text{Baseline building consumption} - \text{Proposed building consumption}) / (\text{Baseline building consumption} - \text{Receptacle and process loads})$.

(b) Each Federal agency shall consider laboratory fume hoods and kitchen ventilation systems as part of the ASHRAE-covered HVAC loads subject to the 30 percent savings requirements, rather than as process loads.

§ 433.6 Sustainable principles for siting, design and construction. [Reserved]

§ 433.7 Water used to achieve energy efficiency. [Reserved]

§ 433.8 Life-cycle costing.

Each Federal agency shall determine life-cycle cost-effectiveness by using the procedures set out in subpart A of part 436. A Federal agency may choose to use any of four methods, including lower life-cycle costs, positive net savings, savings-to-investment ratio that is estimated to be greater than one, and an adjusted internal rate of return that is estimated to be greater than the discount rate as listed in OMB Circular Number A-94 "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs."

PART 434—ENERGY CODE FOR NEW FEDERAL COMMERCIAL AND MULTI-FAMILY HIGH RISE RESIDENTIAL BUILDINGS

Sec.

434.99 Explanation of numbering system for codes.

Subpart A—Administration and Enforcement—General

- 434.100 Purpose.
- 434.101 Scope.
- 434.102 Compliance.
- 434.103 Referenced standards (RS).
- 434.105 Materials and equipment.

Subpart B—Definitions

- 434.201 Definitions.

Subpart C—Design Conditions

- 434.301 Design criteria.

Subpart D—Building Design Requirements—Electric Systems and Equipment

- 434.401 Electrical power and lighting systems.
- 434.402 Building envelope assemblies and materials.
- 434.403 Building mechanical systems and equipment.
- 434.404 Building service systems and equipment.